(FILE 'USPAT' ENTERED AT 11:58:25 ON 13 JUN 1997)

```
L1         64905 XENON OR MERCURY
L2           118 NIROGEN
L3        251644 NITROGEN
L4         84370 AMMONIA
L5        283280 L3 OR L4
L6          7671 GALLIUM NITRIDE OR GAN OR INDIUM NITRIDE OR INN OR ALUMINU
M N
L7        137265 EXICIT? OR PHOTO OR EMIS#####
L8          3993 L1 (P) L7
L9             1 DISSIAT?
L10        22061 DISSOCIAT?
L11           22 L8 AND L5 AND L6
L12            1 PHOTO ENHANCED (5A) GROW#####
=> d l11 8,15,17,18, 19
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8. 5,288,684, Feb. 22, 1994, Photochemical vapor phase reaction apparatus and method of causing a photochemical vapor phase reaction; Shunpei Yamazaki, et al., 118/722, 719, 723E, 723MP; 156/345 [IMAGE AVAILABLE]

15. 4,987,008, Jan. 22, 1991, Thin film formation method; Shunpei Yamazaki, et al., 427/554; 156/643.1, 646.1; 427/524, 534, 582; 437/228 [IMAGE AVAILABLE]

17. 4,910,044, Mar. 20, 1990, Ultraviolet light emitting device and application thereof; Shunpei Yamazaki, et al., 427/583; 313/557; 315/111.21 [IMAGE AVAILABLE]

18. 4,857,139, Aug. 15, 1989, Method and apparatus for forming a layer; Mamoru Tashiro, et al., 134/1.1; 118/50.1, 620, 724; 134/1; 156/345; 427/534, 582, 583 [IMAGE AVAILABLE]

5270 263.

JP361140139A Jun. 27, 1986 L15: 1 of 1

SEMICONDUCTOR DEVICE

INVENTOR: YAMAZAKI, SHUNPEI
APPLICANT: SEMICONDUCTOR ENERGY LAB CO LTD
APPL NO: JP 59263281
DATE FILED: Dec. 13, 1984
INT-CL: H01L21/316; H01L21/318

ABSTRACT:

PURPOSE: To obtain the film having barrier action excellent in permeability to ultraviolet rays and excellent with respect to sodium ions by a method wherein organic aluminum is made to photochemically react with a nitride gas.

CONSTITUTION: Using an organic aluminum, prefarably Al (CH<SB>3</SB>)<SB>3</SB>(called TMA) and **ammonia**, a passivation film of **aluminum** **nitride** is produced by using **photo** vapor phase reaction of irradiation with an ultraviolet ray particularly with a wavelength of 300nm or less. In production of such an AIN, since TMA and **ammonia** are excited with a light of 300nm or less, it is unnecessary to use **mercury**. Further, since this AIN is superior to Si nitride in thermal conductivity by about 5 times the local heating in an IC chip can be prevented in a chip. Besides, the optical energy band width is about 7eV (177nm); therefore, ultraviolet rays (184nm or 254nm) can be penetrated. The AIN is a nitride and so can at the same time be expected in barrier effect against alkali ions of sodium and the like.

=>

1. 5,228,206, Jul. 20, 1993, Cluster tool dry cleaning system; Robert W. Grant, et al., 34/275, 60; 392/418; 432/124 [IMAGE AVAILABLE]

2. 5,173,206, Dec. 22, 1992, Passivated rare earth magnet or magnetic material compositions; E. Douglas Dickens, Jr., et al., 252/62.54; 428/413, 418; 524/401, 403, 434, 435 [IMAGE AVAILABLE]

3. 4,987,008, Jan. 22, 1991, Thin film formation method; Shunpei Yamazaki, et al., 427/554; 156/643.1, 646.1; 427/524, 534, 582; 437/228 [IMAGE AVAILABLE]

4. 4,949,004, Aug. 14, 1990, Gas discharge lamp having temperature controlled, liquid reservoir for liquified portion of gas; Shunpei Yamazaki, et al., 313/35, 44, 45, 565, 634 [IMAGE AVAILABLE]

5. 4,910,044, Mar. 20, 1990, Ultraviolet light emitting device and application thereof; Shunpei Yamazaki, et al., 427/583; 313/557; 315/111.21 [IMAGE AVAILABLE]

6. 4,558,660, Dec. 17, 1985, Semiconductor fabricating apparatus; Jun-ichi Nishizawa, et al., 118/725, 50.1; 219/411 [IMAGE AVAILABLE]
=>

L12 ANSWER 1 OF 6 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD
AN 96-017074 [02] WPIDS
DNN N96-014781 DNC C96-005456
TI Molecular beam epitaxy equipment - has ***excitation*** cell device for activating ***nitrogen*** , comprising ***plasma*** cell including bottom cylindrical casing having opening at crystal growth chamber and supply port for ***nitrogen*** .
DC L03 U11
PA (YAWA) NIPPON STEEL CORP
CYC 1
PI JP 07291791 A 951107 (9602)* 8 pp C30B023-08
ADT JP 07291791 A JP 94-102300 940415
PRAI JP 94-102300 940415
IC ICM C30B023-08
ICS C23C014-06; C23C014-22; C30B029-38; C30B029-40; H01L021-203
AB JP07291791 A UPAB: 960115
The molecular beam epitaxy equipment supplies a gallium-based element, ***nitrogen*** , and a dopant on the surface of a substrate to grow the epitaxial crystal of a ***gallium*** ***nitride*** (***GaN***)-based cpd. semiconductor. The molecular beam epitaxy equipment has: (A) an ***excitation*** cell device for activating the ***nitrogen*** consisting of a ***plasma*** cell having: (a) a bottomed cylindrical casing having an opening at a crystal growth chamber and a supply port for a ***nitrogen*** gas; (b) a magnet on the bottom of the casing; and (c) hf coil interposed at the outer periphery of the casing; (B) a molecular beam strength sensor for determining the molecular beam strength of each growing material and provided in the crystal growth chamber; and (C) a control unit for applying feedback control to molecular beam strength of each growing material based on the determined value obtd. from the sensor.

USE - The molecular beam epitaxy equipment is used for growing epitaxial crystal of the ***gallium*** ***nitride*** (***GaN***)-based cpd. semiconductor.

ADVANTAGE - The use of the ***excitation*** cell device gives high ***plasma*** discharge luminous strength at low pressure (10-7 to 10-9 Torr) with low high-frequency power (5-300 W), readily ***exciting*** the ***nitrogen*** gas. The low pressure allows feedback control above, to stabilise molecular beam strength and constantly gives a high-quality crystal. The results give epitaxial crystal with enhanced quality.

Dwg.1/4
FS CPI EPI
FA AB; GI
MC CPI: L04-A02; L04-D01; L04-D04

EPI: U11-C09D

L12 ANSWER 2 OF 6 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD
AN 96-017073 [02] WPIDS
DNN N96-014780 DNC C96-005455
TI Molecular beam epitaxy equipment - comprises ***plasma*** ***excitation*** cell having bottomed cylindrical casing having opening at crystal growth chamber and supply port for ***nitrogen*** gas, etc..
DC L03 U11
PA (YAWA) NIPPON STEEL CORP
CYC 1
PI JP 07291790 A 951107 (9602)* 7 pp C30B023-08
ADT JP 07291790 A JP 94-102299 940415
PRAI JP 94-102299 940415
IC ICM C30B023-08
ICS C23C014-06; C23C014-22; C30B029-38; C30B029-40; H01L021-203
AB JP07291790 A UPAB: 960115
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ADVANTAGE - The use of the ***excitation*** cell device gives high ***plasma*** discharge luminous strength at low pressure (10-7 to 10-9 Torr) with low high-frequency power (5-300 W). The result readily ***excites*** the ***nitrogen*** gas, reduces ***nitrogen*** molecular beams not contributing to crystal growth, accelerates migration at the growth surface, and depresses contaminants on the inner wall of a discharge chamber. Less variation in pressure in the crystal growth chamber is observed in generating the ***plasma*** . The results stabilise molecular beams of the growing material, to provide the crystal with enhanced quality.

Dwg.1/3
FS CPI EPI
FA AB; GI
MC CPI: L04-A02; L04-D01; L04-D04
EPI: U11-C09D

L12 ANSWER 3 OF 6 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD
AN 95-396805 [51] WPIDS
DNN N95-288154 DNC C95-170121
TI Semiconductor element - has ***GaN*** buffer layer sandwiched between pGaAs substrate and pZnSe layer.
DC L03 U12
PA (SAOL) SANYO ELECTRIC CO LTD
CYC 1
PI JP 07263715 A 951013 (9551)* 5 pp H01L029-861
ADT JP 07263715 A JP 94-50623 940322
PRAI JP 94-50623 940322
IC ICM H01L029-861
ICS H01L033-00
AB JP07263715 A UPAB: 951221
The semiconductor element consists of a pGaAs substrate (1), on which a ***GaN*** buffer layer (4) is formed. The p type carrier like Zn, is doped on the substrate's surface, with doping density 2*108 cm-3. A p type ZnSe layer (2) is then formed on the buffer layer.

A pair of electrodes having `Au' are provided on the ZnSe layer and at the bottom of the substrate respectively. The substrate is heated to 640 deg centigrade. The ***nitrogen*** used for ***plasma*** ***excitation*** is irradiated. The `As' layer of the substrate is thus replaced by the `N' layer and a ***GaN*** buffer layer is formed.

ADVANTAGE - Deters evaporation of V group atom. Prevents compound formation with VI group and III group atom of semiconductor layer. Improves current voltage characteristics. Reduces depletion layer between III-V group compound semiconductor layers thereby reducing threshold voltage.

Dwg.1/7
FS CPI EPI
FA AB; GI
MC CPI: L04-A02A; L04-A03B; L04-C12B
EPI: U12-A01A1A; U12-A01A1B

L12 ANSWER 4 OF 6 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD
AN 95-112004 [15] WPIDS
DNN N95-088133 DNC C95-051570
TI Single crystal film prepn. for ***gallium*** ***nitride*** -based semiconductor device - by placing gallium arsenide substrate in ***nitrogen*** -contg. atmos., generating ***plasma*** , bombarding with gallium and arsenic, etc..
DC L03 M13 U12 V08
PA (KONS) KONICA CORP
CYC 1

PI JP 07037826 A 950207 (9515)* 7 pp H01L021-205
ADT JP 07037826 A JP 93-197657 930716
PRAI JP 93-197657 930716
IC ICM H01L021-205
ICS C30B023-08; C30B025-02; C30B029-38
AB JP07037826 A UPAB: 950425
Prepn. comprises (a) placing a crystal substrate comprising gallium arsenide under a N2-contg. gas atmos.; (b) generating N2 ***plasma*** ; and (c) flying gallium and arsenic under the presence of the N2 ***plasma*** to form a buffer layer comprising gallium-arsenic nitrides (GaAs1-xNx) on the crystal substrate. In forming the buffer layer, the generating amt. of the N2 ***plasma*** is continuously or stepwise increased and the flying amt. of arsenic is continuously or stepwise decreased. The result continuously or stepwise increases the content rate (x) of N in the buffer layer from the crystal substrate side to the single crystal film side.

The ***gallium*** ***nitride*** -based cpd. semiconductor has a crystal substrate comprising gallium-arsenide, the buffer layer formed on the crystal substrate and a semiconductor layer formed on the buffer layer comprising a ***gallium*** ***nitride*** based cpd.

USE/ADVANTAGE - Used for ***gallium*** ***nitride*** -based cpd. semiconductor device. Continuously changing lattice constant from the crystal substrate to the semiconductor layer effectively relaxes lattice defects. The resulting single crystal film has less lattice defects and good crystallinity. The resulting semiconductor device has improved light ***emission*** efficiency and electrical characteristics including mobility and resistivity.

Dwg.1/4
FS CPI EPI
FA AB; GI
MC CPI: L04-A02A; L04-C01B; L04-C12B; M13-E02
EPI: U12-A01B2; U12-E01A1; V08-A04A

L12 ANSWER 5 OF 6 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD
AN 93-404957 [50] WPIDS
DNN N93-313475 DNC C93-179942
TI Aluminium nitride thin film deposition by ***nitrogen*** ***plasma*** sputtering - with an aluminium target and utilising the ***nitrogen*** as both reactive and sputtering gas.
DC L03 M13 U11
IN DOAN, T T; KIM, S C; YU, C C
PA (MICR-N) MICRON TECHNOLOGY INC
CYC 1
PI US 5270263 A 931214 (9350)* 9 pp H01L021-465

ADT US 5270263 A US 91-810837 911220
PRAI US 91-810837 911220
IC ICM H01L021-465
ICS C23C014-00
AB US 5270263 A UPAB: 940203
Sputtering process for forming an ***ALN*** etchstop layer comprises: deposting a layer of ***ALN*** on a substrate by placing a target substrate of Al in a vacuum chamber and introducing an energised N gas ***plasma*** into the chamber while excluding other gases, with the N gas both a reactive gas and a sputter gas such that Al atoms are released from the target and deposited withe N on a surface of the substrate; depositing a dielectric layer over the ***ALN*** layer; ***photopatterning*** and etching the dielectric layer to form contact vias to the substrate using the ***ALN*** layer as an etchstop; removing the ***ALN*** exposed in the contact vias.

USE/ADVANTAGE - Novel process for depositing a thin film of ***ALN*** of high purity. Partic. suitable for formation of an etchstop layer in semiconductor fabrication. The process is simple, cost effective and repetitive.

Dwg.6E/6
FS CPI EPI
FA AB; GI
MC CPI: L04-C06; M13-G01
EPI: U11-C05B2; U11-C05B6; U11-C05D3; U11-C07D2

L12 ANSWER 6 OF 6 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD
AN 93-138144 [17] WPIDS
DNN N93-105413 DNC C93-061797
TI ***Gallium*** ***nitride*** semiconductor film prodn. - involves supplying active ***nitrogen*** produced in ***plasma*** gas cell to substrate surface.
DC L03 U11 U12
PA (ASAH) ASAHI CHEM IND CO LTD
CYC 1
PI JP 05074710 A 930326 (9317)* 8 pp H01L021-203
ADT JP 05074710 A JP 91-231648 910911
PRAI JP 91-231648 910911
IC ICM H01L021-203
ICS B01J019-08; C30B023-08; C30B029-38; H01L021-205; H01L033-00
AB JP05074710 A UPAB: 931025
In the prodn. of Ga nitride semiconductor film in a vacuum, the improvement is that active ***nitrogen*** produced in a ***plasma*** gas cell is supplied to the substrate surface.

USE/ADVANTAGE - The semiconductor film can be produced at low temp. with high prodn. efficiency. The semiconductor film is suitable for display elements, or ultraviolet-blue luminescent

diodes or laser diodes used in ***photo*** -communication equipment, etc.

The ***plasma*** gas cell (8) has a gas introducing tube (12), orifice (10), and electrode(s) and coil(s) for generation of ***plasma*** . The ***nitrogen*** source is, e.g., ***nitrogen*** , ammonia, ***nitrogen*** trifluoride or their mixt. contg. inert gas such as Ar gas or He gas as diluent. The substrate, e.g., consists of Si, Al2O3, ZnO, MgO, SiC, III-V semiconductor such as GaAs or InAs, II-VI semiconductor such as ZnSe, or glass such as quartz glass or MESA glass etc.

Dwg.1/6

FS CPI EPI

FA AB; GI

MC CPI: L04-A; L04-C01A

EPI: U11-C01J3A; U12-A01A2

=>

(FILE 'HOME' ENTERED AT 14:26:25 ON 13 JUN 1997)

FILE 'INSPEC' ENTERED AT 14:27:21 ON 13 JUN 1997

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L1          5687 GALLIUM NITRIDE OR GAN OR ALUMINUM NITRIDE OR ALN OR INDI
L2         33491 XENON OR MERCURY
L3        398886 PHOT OR EXCIT? OR EMISS#####
L4         14664 PHOTO
L5        384543 PHOTO?
L6        697446 L3 OR L5
L7         61240 NITROGEN
L8             2 L1 AND L2 AND L6 AND L7
```

FILE 'WPIDS' ENTERED AT 14:35:22 ON 13 JUN 1997

```
L9             0 L8
L10        54163 PLASMA
L11           34 L1 AND L7 AND L10

=> d l11 2,3,14 all
```

L11 ANSWER 2 OF 34 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD
AN 96-017074 [02] WPIDS
DNN N96-014781 DNC C96-005456
TI Molecular beam epitaxy equipment - has excitation cell device for activating ***nitrogen*** , comprising ***plasma*** cell including bottom cylindrical casing having opening at crystal growth chamber and supply port for ***nitrogen*** .
DC L03 U11
PA (YAWA) NIPPON STEEL CORP
CYC 1
PI JP 07291791 A 951107 (9602)* 8 pp C30B023-08
ADT JP 07291791 A JP 94-102300 940415
PRAI JP 94-102300 940415
IC ICM C30B023-08
ICS C23C014-06; C23C014-22; C30B029-38; C30B029-40; H01L021-203
AB JP07291791 A UPAB: 960115
The molecular beam epitaxy equipment supplies a gallium-based element, ***nitrogen*** , and a dopant on the surface of a substrate to grow the epitaxial crystal of a ***gallium*** ***nitride*** (***GaN***)-based cpd. semiconductor. The molecular beam epitaxy equipment has: (A) an excitation cell device for activating the ***nitrogen*** consisting of a ***plasma*** cell having: (a) a bottomed cylindrical casing having an opening at a crystal growth chamber and a supply port for a ***nitrogen*** gas; (b) a magnet on the bottom of the casing; and (c) hf coil interposed at the outer periphery of the casing; (B) a molecular

beam strength sensor for determining the molecular beam strength of each growing material and provided in the crystal growth chamber; and (C) a control unit for applying feedback control to molecular beam strength of each growing material based on the determined value obtd. from the sensor.

USE - The molecular beam epitaxy equipment is used for growing epitaxial crystal of the ***gallium*** ***nitride*** (***GaN***)-based cpd. semiconductor.

ADVANTAGE - The use of the excitation cell device gives high ***plasma*** discharge luminous strength at low pressure (10-7 to 10-9 Torr) with low high-frequency power (5-300 W), readily exciting the ***nitrogen*** gas. The low pressure allows feedback control above, to stabilise molecular beam strength and constantly gives a high-quality crystal. The results give epitaxial crystal with enhanced quality.

Dwg.1/4

FS CPI EPI
FA AB; GI
MC CPI: L04-A02; L04-D01; L04-D04
EPI: U11-C09D

L11 ANSWER 3 OF 34 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD
AN 96-017073 [02] WPIDS
DNN N96-014780 DNC C96-005455
TI Molecular beam epitaxy equipment - comprises ***plasma*** excitation cell having bottomed cylindrical casing having opening at crystal growth chamber and supply port for ***nitrogen*** gas, etc..
DC L03 U11
PA (YAWA) NIPPON STEEL CORP
CYC 1
PI JP 07291790 A 951107 (9602)* 7 pp C30B023-08
ADT JP 07291790 A JP 94-102299 940415
PRAI JP 94-102299 940415
IC ICM C30B023-08
ICS C23C014-06; C23C014-22; C30B029-38; C30B029-40; H01L021-203
AB JP07291790 A UPAB: 960115
The molecular beam epitaxy equipment supplies a gallium-based element, ***nitrogen*** , and a dopant on the surface of a substrate to grow the epitaxial crystal of a ***gallium*** ***nitride*** -based cpd. semiconductor. An excitation cell device for supplying the ***nitrogen*** on the surface of the substrate consists of a ***plasma*** excitation cell having: (a) a bottomed cylindrical casing having an opening at a crystal growth chamber and a supply port for a ***nitrogen*** gas; (b) a magnet on the bottom of the casing; and (c) a high-frequency coil interposed at the outer periphery of the casing.

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ADVANTAGE - The use of the excitation cell device gives high ***plasma*** discharge luminous strength at low pressure (10-7 to 10-9 Torr) with low high-frequency power (5-300 W). The result readily excites the ***nitrogen*** gas, reduces ***nitrogen*** molecular beams not contributing to crystal growth, accelerates migration at the growth surface, and depresses contaminants on the inner wall of a discharge chamber. Less variation in pressure in the crystal growth chamber is observed in generating the ***plasma*** . The results stabilise molecular beams of the growing material, to provide the crystal with enhanced quality.

Dwg.1/3

FS CPI EPI

FA AB; GI

MC CPI: L04-A02; L04-D01; L04-D04
EPI: U11-C09D

L11 ANSWER 14 OF 34 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD

AN 92-349466 [42] WPIDS

DNN N92-266607 DNC C92-155164

TI Highly insulating monocrystalline ***gallium*** ***nitride*** thin films - using a molecular beam source of gallium an an activated ***nitrogen*** source in a two-step process.

DC L03 U11 U12 V08

IN MOUSTAKAS, T D

PA (UYBO-N) UNIV BOSTON

CYC 16

PI WO 9216966 A1 921001 (9242)* EN 17 pp H01L021-203
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL SE
W: JP
EP 576566 A1 940105 (9402) EN H01L021-203
R: DE GB
JP 06508000 W 940908 (9440) 6 pp H01L021-314
US 5385862 A 950131 (9511) 9 pp H01L021-00
EP 576566 A4 950315 (9612) H01L021-203

ADT WO 9216966 A1 WO 92-US2242 920318; EP 576566 A1 EP 92-908776 920318, WO 92-US2242 920318; JP 06508000 W JP 92-508357 920318, WO 92-US2242 920318; US 5385862 A Cont of US 91-670692 910318, US 93-113964 930830; EP 576566 A4 EP 92-908776

FDT EP 576566 A1 Based on WO 9216966; JP 06508000 W Based on WO 9216966

PRAI US 91-670692 910318

REP 1.Jnl.Ref ; US 4144116; US 4792467; 2.Jnl.Ref ; DE 3802732

IC ICM H01L021-203; H01L021-314
ICS H01L021-02; H01L021-205; H01L021-318

AB WO 9216966 A UPAB: 931006

Preparing insulating monocrystalline ***GaN*** films comprises: providing in a MBE growth chamber a single crystal substrate with the appropriate lattice match to the desired pahse of ***GaN*** ; providing a MB Ga source, and an activated N source; exposing the substrate to the sources to deposit a film using a 2-step growth process comprising a low temp. nucleation step and a high temp. growth step. Pref. the activated N is a N or NH3 ***plasma*** generated in an electron cyclotron resonsance microwave ***plasma*** , at a pressure 10 power (-3) to 10 power (-5) torr; the Ga flux is 2.0-5.0 x 10 power (-7) torr.

Further disclosed are methods for preparing p- or n-type doped ***GaN*** films by additionally providing, respectively, acceptor or donor sources, and negatively or positively charging the substrate surface. Pref. substrates are (100) Si, (111) Si, (11-20) sapphire, (0001) sapphire, (1-102) sapphire, (100) GaAs, (111) GaAs, SiC, ZnO, or MgO.

USE/ADVANTAGE - Preparation and doping of highly insulating monocrystalline ***GaN*** thin films with resistivities of up to 10 power 10 ohm/cm and mobilities 100 cm2 V -1 S -1 at 200 deg. C. P-n junctions may be efficiently prepared by the technique.

1/3

FS CPI EPI

FA AB; GI

MC CPI: L04-A; L04-C01A; L04-C12B; L04-D04

EPI: U11-C01A2; U11-C01B; U11-C01J3A; U11-C02J1A; U11-C09C; U11-C09D; U12-A01B2; V08-A04A

L12 ANSWER 1 OF 6 WPIDS COPYRIGHT 1997 DERWENT INFORMATION LTD
AN 96-017074 [02] WPIDS
DNN N96-014781 DNC C96-005456
TI Molecular beam epitaxy equipment - has ***excitation*** cell device for activating ***nitrogen*** , comprising ***plasma*** cell including bottom cylindrical casing having opening at crystal growth chamber and supply port for ***nitrogen*** .
DC L03 U11
PA (YAWA) NIPPON STEEL CORP
CYC 1
PI JP 07291791 A 951107 (9602)* 8 pp C30B023-08
ADT JP 07291791 A JP 94-102300 940415
PRAI JP 94-102300 940415
IC ICM C30B023-08
ICS C23C014-06; C23C014-22; C30B029-38; C30B029-40; H01L021-203
AB JP07291791 A UPAB: 960115
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Dwg.1/4
FS CPI EPI
FA AB; GI
MC CPI: L04-A02; L04-D01; L04-D04